Remarks

Claims 1-57 are pending in the application. Claims 1-4, 6-11, 14-17, 19, 25-28, 30, 31, 33-35, 37-42, 46-48 and 50-57 stand rejected. Claims 5, 12, 13, 18, 20-24, 29, 32, 36, and 39 are objected to. Claims 43-45 are allowed. By this paper, claims 3 and 34 have been canceled. Reconsideration of the remaining claims is respectfully requested.

Claims 1-4, 6-11, 14-17, 19, 25-28, 30, 31, 33-35, 37-42, 46-48, and 50-57 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,742,184 to Finseth et al. ("Finseth"). Finseth discloses a program guide transmitting system 46 that receives schedule feeds 24 providing "electronic schedule information about the timing and content of various television channels, such as that found in television schedules contained in newspapers and television guides." Column 6, lines 7-18. A program guide database 48 receives the schedule feeds 24 and organizes data into a standard format. Column 6, lines 34-36. A compiler 52 converts program guide data into a proper format and outputs the program guide data to one or more sub-databases 54. Column 6, lines 36-41.

Independent claims 1 and 33 require objects in an object schedule. A schedule is defined as "1. a plan of procedure, usu. Written, for a proposed objective, esp. with reference to the sequence of events and the time allotted for each. 2. a series of things to be done or of events to occur at or during a particular time or period." Webster's College Dictionary, 1992. A database is "a collection of organized, related data, esp. one in electronic form that can be accessed and manipulated by specialized computer software." Webster's College Dictionary, 1992.

A schedule is not a database. A database is a repository of accessible data whereas a schedule is a list of things to occur at a particular time.

In the present application, the object schedule is a list of objects to be broadcast according to their position of priority. In the Office Action, the sub-database 54 of Finseth is identified as the object schedule. In Finseth, the sub-database 54 temporarily stores program guide objects but there is no teaching of objects being listed based on priority. In the present application, the object schedule is actively managed and updated to list objects based on priorities and scores relating to utility factors, transmit time variables, timer value, next transmit time variable, and other factors. The sub-database 54 of Finseth does not list objects based on priority as required by a schedule.

In order to expedite prosecution, claim 1 has been amended to incorporate the limitations of claim 3. Similarly, claim 33 has been amended to incorporate the limitations of claim 34. Claims 1 and 33 require that each object have a utility factor dependent at least to some degree on the position of the object in the schedule. Finseth has no teaching of the position of objects within the sub-database 54. Finseth further has no teaching of utility factors corresponding to objects and the relation of object position to utility factors. A utility factor is calculated based on the importance of an object, the timeliness of an object, and the number of objects previously transmitted in the same or related classes as the current object. See Application Figures 6-8 and related text.

In reference to utility factors, the Office Action cites to column 7, line 57 to column 9, line 58 of Finseth. This passage discloses various objects organized from

the program guide database 48 and transmitted. More specifically, Finseth discloses channel list object, channel object, boot event object, general program object, general schedule object, master schedule object, time object, deletion object, HTML object, reserved object, and name system object. Finseth does not disclose objects that each have utility factors that depend on the object's position in a schedule. The applicant respectfully requests the Examiner to identify where in the referenced passage, or anywhere in Finseth, a utility factor assigned to an object and depending on an object's position in a schedule is present.

An anticipation under section 102 is proper only if the reference shows exactly what is claimed. Titanium Metals Corp. v. Banner, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985). "[E]very element of the claimed invention must be identically shown in a single reference." In re Bond, 910 F.2d 831, 15 USPQ 2d 1566 (Fed. Cir. 1990). Finseth does not recite an object schedule and utility factors that depend on the object's position in a schedule and cannot anticipate claims 1 and 33. As claims 2, 4, 6-8, 9-11, 14-17, 35, 37, and 38 include the limitations of either 1 or 33, they likewise represent patentable subject matter.

Independent claims 19 and 39 require that each object have a utility factor and that the value of the utility factor depends on the position of the object in the schedule. As discussed above, Finseth does not teach a schedule, a utility factor, or a utility factor value that depends on the position of the object in a schedule.

Independent claims 19 and 39 further require calculating an overall schedule utility factor for the schedule by combining the utility factors of each of the scheduled objects using a predefined function. For disclosing these limitations, the Office Action

cites to column 7, lines 10-40 of Finseth. This passage discloses the composition of objects, the composition of frames, and a list of preferred object types. There is no mention of an overall schedule utility factor. There is no discussion of combining individual utility factors to derive an overall schedule utility factor. These limitations are completely absent in Finseth. The applicant respectfully requests the Examiner to identify which element in Finseth serves as an overall schedule utility factor.

Independent claims 19 and 39 further require reordering scheduled objects so that the overall utility factor is increased. For this limitation, the Office Action cites to column 6, lines 60-65+ of Finseth. In this passage, Finseth discloses transmitting program guide objects more frequently for upcoming programs. To accomplish this, program guide objects for upcoming programs are stored in cyclers 56 with higher rates of transmission. The cyclers 56 have established transmission rates to automatically transmit objects stored within at certain intervals, i.e., 1, 5, and 10 seconds.

There is no teaching whatsoever of reordering an existing list of scheduled objects into a new list. Finseth simply teaches transmitting program guide objects for upcoming programs more frequently by storing those program guide objects within a cycler that transmits more frequently. There is absolutely no teaching in Finseth of calculating an overall schedule utility factor or reordering a list of objects to increase the overall utility factor.

As claims 25-28, 30 and 31 depend from claim 19, they likewise represent patentable subject matter. Claim 29 is recited on the Office Action summary as being

objected to, but is then rejected in the body of the Office Action. As claim 29 also depends from claim 19, it represents patentable subject matter.

Independent claim 40 requires providing a transmit time variable for each object. In the present application, the transmit time variable for all objects is initialized to a predetermined value such as the current time. A score for determining object selection is dependent on the difference between the transmit time variable of the object and the current timer value. Once an object is transmitted the transmit time for the object is set to the current time value. By setting the transmit time for the selected object to the current time value, the score of that object is reduced, preferably to zero. Page 13, line 26 to page 14, line 9. Thus, the transmit time value is based on the length of time from the last object transmit.

For disclosing a transmit time value, the Office Action refers to column 6, lines 13-42 of Finseth. The cited passage discusses schedule feeds 24 storing schedule data for television channels in a program guide database 48, the program guide database 48 organizing the schedule data into a standard format, and a compiler 52 converting the schedule data into objects. There is no teaching of a transmit time value indicating the length of time since an object was transmitted. The applicant respectfully requests the Examiner to identify where in the passage a transmit time value or any other value having this characteristic is disclosed.

Claim 40 further requires initializing the transmit time variable for each object to a predetermined value, maintaining a timer value, calculating a score for each object, wherein the score is dependent on the difference between the transmit time variable for each object and the timer value. For disclosing these limitations, the

Office Action refers to column 6, lines 51-67 of Finseth. In this passage, Finseth discloses cyclers 56 that transmit objects to combiner 42 at different rates. Cycler 56A transmits objects every second, cycler 56B transmits objects every 5 seconds, and cycler 56C transmits objects every 10 seconds. Thus, objects are transmitted at intervals automatically based on which cycler 56 they are stored within. Program guide objects for near-term programs are sent more frequently than program guide objects for long-term programs. "[T]he program guide objects for the most current programs are sent to a cycler 56 with a high rate of transmission, while program guide objects for later programs are sent to cyclers 56 with a lower rate of transmission." Column 6, lines 63-67.

Unlike the present application, Finseth delivers program guide objects based on the time for showing corresponding programs. The program guide objects are then stored within a cycler having an predetermined transmission rate. The cycler automatically transmits objects without calculation of the last time an object was transmitted.

There is absolutely no teaching in Finseth of calculating a score for each object dependent on the difference between the transmit time variable for an object and the timer value. There is not even a teaching of calculating a score for each object. In Finseth, cyclers automatically and without calculation transmit objects at predetermined intervals, i.e., 1, 5, and 10 seconds. Indeed, in Finseth, there is absolutely no need to calculate a score or determine a transmit time value because the transmission rates for the cyclers are constant.

In the present application, a score is calculated based on the duration since the last time an object was transmitted. Furthermore, the score and transmit time variable have absolutely no relation to the broadcast of some other media content. Rather, the score and transmit time variable depend on the object's own transmit experiences. Thus, Finseth does not teach a calculated score based on the difference between an object's transmit time variable and a timer value.

Claim 40 further requires setting the transmit time for an object with the highest score to the timer value. For this disclosure, the Office Action refers to column 8, lines 40-65 of Finseth. The cited passage discloses a general schedule object and a master schedule object which are two of several types of objects that may be transmitted in Finseth. The applicant cannot find any discussion of setting a transmit time for an object with a highest score to the timer value. Finseth does not teach applying scores to objects and certainly does not teach identifying an object with a highest score. The applicant respectfully requests the Examiner to identify where in Finseth there is a teaching of setting the transmit time for the highest score object with the timer value. As claims 41 and 42 depend from claim 40, they likewise represent patentable subject matter.

Independent claim 46 recites the use of next transmit time variables for each object. The present application discloses that a packet in an object with the lowest next transmit time variable determines if that packet will be transmitted. Once a selected packet is transmitted, the next transmit time variable for the object that had the packet transmitted is incremented by a value. Page 38, lines 22-30. A variable is defined as "something that may or does vary." Webster's College Dictionary, 1992.

Thus, a next transmit time variable is a varying value relating to an object's future transmit time.

Finseth discloses storing objects temporarily in cyclers 56. Each cycler 56 has a predetermined transmit rate, i.e., 1, 5, or 10 seconds. The cycler transmit rates do not vary and are not next transmit time variables. The cycler transmit rates relate to frequency transmission and cannot be incremented. All objects within the same cycler retain the same transmit rate and there cannot be a selection of an object with a lowest next transmit time variable.

Thus, Finseth does not disclose providing transmit time variables for each object. Finseth does not disclose the selection of an object with the lowest next transmit time variable as all objects within a cycler having the highest transmit rate are subject to the same transmit conditions. Finseth does not disclose intializing each next transmit time variable to a predetermined value and then incrementing a next transmit time variable for a selected object. Cycler transmit rates are fixed and are not variable like a next transmit time variable. In Finseth, objects are transmitted at known transmit rates, whereas next transmit time variables create variance between transmit times.

Finseth does not anticipate claim 46 because the concept of a transmit variable and a cycle transmit rate are completely different. As claims 47, 48, and 50 depend from claim 46, they likewise represent patentable subject matter.

Independent claim 51 requires that incoming objects are received into an object schedule. As discussed above in reference to independent claims 1, 19, 33, and 39, Finseth does not disclose a schedule. Claim 51 further requires calculating a

priority score for each of the objects and scheduling the objects for delivery such that the objects with the highest priority score are delivered first. Finseth teaches transmitting program guide objects for upcoming programs more frequently by storing those program guide objects within a cycler that transmits more frequently.

There is absolutely no teaching in Finseth of calculating a priority score. Cycler transmission rates are not priority scores as these values are fundamentally different in execution. A cycler transmission rate may not be altered, whereas an object's priority score may be incremented to thereby change an object's position in a schedule. Placement of objects into a cycler depends on an upcoming program broadcast, whereas a priority score is based entirely on the object. Finseth cannot anticipate claim 51. As claims 52-57 depend from claim 51, they likewise represent patentable subject matter.

In view of the foregoing, all pending claims represent patentable subject matter. A Notice of Allowance is respectfully requested.

Respectfully submitted,

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